Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of heating a gas sensor including a ceramic substrate and a heater embedded in said substrate by controlling a temperature of said heater, said method comprising the steps of:

increasing the temperature of said heater at a first rate ~~rapidly~~ when the temperature of said substrate is below a predetermined temperature~~low~~; and

increasing the temperature of said heater at a second rate which is lower than said first rate ~~slowly~~ when the temperature of said substrate is above a predetermined temperature~~high~~.

2. (Currently Amended) A method according to claim 1, wherein the temperature of said heater is increased at said second rate~~slowly~~ when the temperature of said substrate is equal to or greater than 600 degrees centigrade.

3. (Currently Amended) A method according to claim 1, wherein the temperature of said heater is increased at a speed equal to or less than 40 degrees centigrade/sec. when the temperature of said substrate is equal to or greater than 600 degrees centigrade.

4. (Currently Amended) A method according to claim 1, wherein the temperature of said heater is increased at said first rate ~~rapidly~~ when the temperature of said substrate is equal to or less than 500 degrees centigrade.

5. (Currently Amended) A method according to claim 1, wherein the temperature of said heater is increased at a speed within a range greater than 20 degrees

centigrade/sec.; but equal to or less than 100 degrees centigrade/sec. when the temperature of said substrate is equal to or less than 500 degrees centigrade.

6. (Currently Amended) A method according to claim 1, wherein a voltage applied to said heater changes depending on the time passed for increasing the temperature of said heater, according to an exponential curve.

7. (Currently Amended) A method according to claim 1, wherein said heater has a heating unit, and a resistance of said heating unit is measured and controlled for increasing the temperature of said heater.

8. (Currently Amended) A gas sensor having a ceramic substrate and a heater embedded in said substrate, said gas sensor comprising:

means for measuring a resistance of a heating unit of said heater; and

means for controlling a rate of increasing the resistance of said heating unit per unit time.

9. (Currently Amended) A gas sensor according to claim 8, wherein said resistance measuring means comprises at least one measuring lead for measuring the resistance of said heating unit.